IV. REPORT OF THE VALUE ENGINEERING SUBGROUP

To ensure that existing resources are being stretched to their practical limit, MaineDOT enlisted the aid of a multi-disciplined Value Engineering (VE) Team to analyze opportunities for cost reduction in the Highway and Bridge Program. This Team included DOT staff, the construction industry, engineering consultants, municipal officials, the Federal Highway Administration, special interest groups, and a member of the Transportation Committee - in all 41 members (see Appendix B). The VE Team was asked to consider the following questions and forward cost reduction ideas to MaineDOT in advance of their January 11 meeting.

- What design criteria could be modified to decrease costs but preserve safety?
- Are there alternative capital treatments that should be considered?
- Would changes in risk allocation or bidding requirements be helpful while still fair?
- Is there opportunity in lessening work restrictions and allowing more road/bridge closures during construction?
- Is QC/QA providing commensurate value-added for its cost?
- Is there a way to increase schedule reliability for utility adjustments?
- What measures would increase participation in the bidding process?
- Would more widespread use of prefabricated products reduce total costs?
- Are there other options that should be considered?

Deputy Commissioner Bruce Van Note opened the VE Team meeting and informed the group that the cost-savings goal from this effort was $5 to $10 million dollars. Team members had already provided almost 100 initial ideas for cost reduction, and more were added during the morning session of the Team meeting. These ideas were tabulated and provided back to the Team, along with MaineDOT's initial estimate of potential savings and possible timeframe for each idea if implemented. All ideas were included on the original list, but their source was kept anonymous to allow each idea to be considered solely on its merits.

During the afternoon session, the VE Team subdivided into four groups with the task of identifying those ideas that held the greatest opportunity for immediate savings on a program basis. The results are tabulated below.

VE Team Top Recommendations

January 11, 2006

Category	VE Idea	2006/2007 Potential Savings
BRIDGE	• Place more emphasis on bridge rehabs vs. replacement • Stop painting bridges (2 year moratorium) • Work with agencies on a project basis to reduce in-stream restrictions • Close bridges with reasonable detours & low traffic volumes • Reduce specs & design criteria for low volume, small bridges • Eliminate QC/QA penalties for buried concrete	$2M
CONTRACT	• Allow road closures / detours during construction • Assign more construction risk to State • Fully implement Cost Base Estimating • Utilize more Prebid Meetings • Use more Locally Administered Projects with State funds	$1M
HIGHWAY	• Eliminate guardrail upgrades when safety performance is adequate • Maintain existing vertical/horizontal alignment unless demonstrated safety issue (non-NHS) - use more Advisory Speed Signs to mitigate • Improve utility relocation schedules and construction coordination • Eliminate 2' offset to face of guardrail • Use more alternatives to new subbase materials • Allow more road closures / flexibility in construction sequencing	$2M
PAVING	• Use "Town-like" specs for Maintenance Paving • Consider mitigating / reducing penalty provisions in QC/QA • Revise Method C penalties, etc. & seek Federal approval • Foster better communications / consistency of spec interpretations • Paving / Sealing Built Roads - Option 1 - Expand use of Maintenance mix (9.5) - State	$5M

only $ - Option 2 - Create new Federally accepted 3/4" spec with reduced risk and eliminate some "Superpave" mix requirements • Allow Contractor to have / access State PMRAP stockpiles	
TOTAL	**$10M**

While some of the above ideas will generate cost savings through process improvements or greater design/contracting flexibility, other ideas may reduce quality or add to user costs. Public acceptability of reduced traveler convenience during construction will be necessary, along with Federal Highway Administration approval for some ideas. The VE Team concluded that MaineDOT has already implemented a number of measures with the greatest rate-of-return, and therefore additional savings are not easily found.

It is noted that the VE Team did not attempt to match VE Ideas with specific projects due to time constraints. Considerable project-specific knowledge is needed to match VE Ideas with projects, and MaineDOT is beginning that process now. True cost-reduction requires examination of the entire project portfolio and adjustments to project budgets. Speed is of the essence, because there is little or no opportunity for projects that have been developed to the point of near advertising for bids.

MaineDOT staff developed a first order approximation of possible savings, and found that expedient implementation could be expected to generate $10 million dollars in project savings, which amounts to roughly 3% of the total program. MaineDOT also plans to revisit the entire list of VE Ideas for possible application to current and future projects, as it continues to take steps to provide quality infrastructure to Maine’s taxpayers at the lowest possible cost.